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Mosites # 10276 FKM Pressure Distribution Pad

The manufacturer of composite aerospace articles often involves the co-vulcanization of flat or contoured panels with various shapes of strengtheners (T-stringers; I-Beam stiffeners; C-channels; etc). In order to assure proper consolidation of the composite pre-peg at bond joints and to prevent movement of the reinforcing members during autoclave cycles, rubber blocks called pressure pads are employed. These rubber blocks are shaped to the configuration of the tool cavity and are intended to be reusable. A high temperature resistant elastomer with dimensional stability upon extended cure cycling is necessary.

Mosites Rubber Company has developed an economical fluorocarbon compound, Mosites # 10276, that appears ideally suited for this application. It exhibits low shrinkage and can be co-cured with epoxy pre-preg reinforcement if a more rigid, less flexible rubber part is desired, Because it is a fluorocarbon polymer (FKM), accidental exposure to temperatures up to 450°F will have no adverse effect on the cured rubber part. The material is supplied in uncured or “B-stage” calendered sheet form, 1/16 inch thick by 54 inches wide. Other thickness or widths may be available as special order request.

The physical properties shown below were obtained on molded 0.080-inch thick ASTM samples. They are typical of Mosites # 10276 but they should not be used to set Quality Control Specification minimum requirements.

Typical Physical Properties

	<u>Original Properties</u>	<u>Heat Aged 72 Hours @ 375°F</u>	<u>Change</u>
Mosites # 10276			
Hardness (Shore A)	79	88	+9 PTS
Tensile Strength(psi)	640	1300	+103%
Elongation at Break (%)	450%	210%	-53%
Tear Strength (ppi)	137	150	+10%
Shrinkage			
Length	-2.1%	-1.3%	-3.4%
Width	-2.0%	-.07%	-2.7%
Competitive Material			
Hardness (Shore A)	59	85	+26 PTS
Tensile Strength (psi)	1625	660	-59%
Elongation at Break (%)	725%	130%	-80%
Tear Strength (ppi)	216		-49%
Shrinkage			
Length	-3.2%	-2.1%	-5.3%